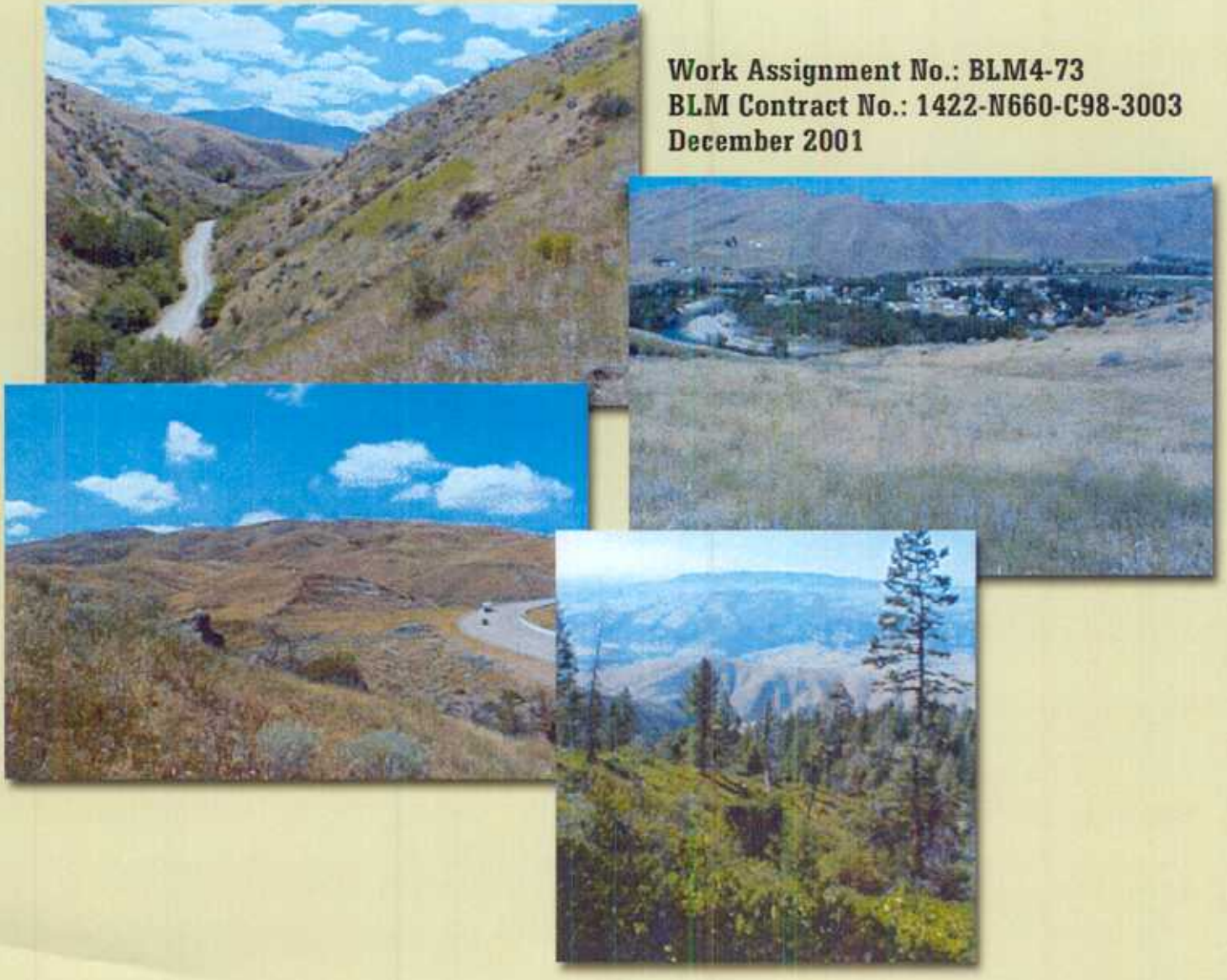
WILDLAND-URBAN INTERFACE COMMUNITIES-AT-RISK PROGRAM

Final Mitigation Plan Report
Lower Snake River District
Horseshoe Bend Assessment Area



Work Assignment No.: BLM4-73
BLM Contract No.: 1422-N660-C98-3003
December 2001

DYNAMAC
CORPORATION

FINAL
WILDLAND-URBAN INTERFACE COMMUNITIES-AT-RISK MITIGATION PLAN REPORT

LOWER SNAKE RIVER DISTRICT
HORSESHOE BEND ASSESSMENT AREA

Prepared for:

U.S. Department of Interior
Bureau of Land Management
Lower Snake River District
Boise, Idaho

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1.0 EXECUTIVE SUMMARY

During the 2000 fire season more than 6.8 million acres of public and private lands were burned by wildfire, resulting in loss of property, damage to resources, and disruption of community services. Many of these fires occurred in wildland-urban interface areas and exceeded fire suppression capabilities. The President of the United States directed the Secretaries of the Departments of Agriculture and the Interior to increase federal investments in projects to reduce the risk of wildfire and associated losses in wildland-urban interface areas. As a result, the Bureau of Land Management (BLM), Lower Snake River District is currently in the process of forming partnerships with local governments to plan fuels reduction treatments and other mitigation measures targeted at the wildland-urban interface in the vicinity of Federal lands. These partnerships are indicative of a shared responsibility to reduce wildland fire risks to communities.

The wildland-urban interface occurs where man-made structures meet or intermix with wildland vegetation. In certain situations, specific actions such as fuels reduction around communities, forest and rangeland restoration, infrastructure improvements, and public education and outreach may reduce the risk of catastrophic fire in the wildland-urban interface. To this end, the BLM implemented the Communities-at-Risk, Wildland-Urban Interface Program. The program seeks to reduce the threat of wildland fires to communities through public outreach, the reduction or prevention of fuel build-up, and increasing the fire protection capabilities of communities. The Horseshoe Bend community was selected by the BLM in order to assess the hazard of wildland fire and to identify specific actions that may reduce the risk.

Dynamac Corporation was contracted to support the BLM in their assessment of wildfire risk to the Horseshoe Bend community in the wildland-urban interface. Dynamac scientists conducted fuel surveys by categorizing the vegetation, slope, and aspect of the land in the Horseshoe Bend assessment area. The risk of wildland fire to homes, structures, and cultural resources on private land was also evaluated according to building materials, the presence of survivable space, road access, and the response time of the local fire department. Dynamac assessed the adequacy of the community's service infrastructure (including roads, water supplies, and fire fighting equipment) by systematic observation, and by interviewing community officials and fire prevention personnel. A community open house was held to disseminate information about the Communities-at-Risk, Wildland-Urban Interface Program to citizens, to afford them the opportunity to identify resources that are of value to the community, and to have them identify

actions that may reduce the risk of wildland fire. The information gathered from the fuel surveys, structural surveys, interviews, infrastructure assessments, and community profile was integrated into two reports: a hazard assessment report and a mitigation report. After preparation and BLM review of the draft reports, a second community meeting was held in Horseshoe Bend on October 29, 2001, to present to local officials and community members results of the surveys and interviews, and to present and discuss Dynamac's proposed recommendations to BLM for mitigation activities that can be undertaken to reduce risk from wildland fires in the Horseshoe Bend community. A summary of the second public meeting is included in the hazard assessment report.

The following actions items were identified to reduce the hazard of wildfire in the Horseshoe Bend assessment area based on a synthesis of information in the hazard report, including review comments from BLM and discussion at the second public meeting:

- Develop an on-going education and outreach program throughout the assessment area to encourage firewise practices; and
- Develop and maintain three water-storage tanks in the Horseshoe Bend area to provide water for fire fighting purposes. Recommended locations for the tanks are: 1) the Horseshoe Vue subdivision; 2) along Porter Creek (near the intersection of Porter Creek Road and Jerusalem Valley Road); and 3) west of Huntington, along the south side of the Payette River, at a cluster of homes in T07N R02E, sections 31 and 32.

2.0 GOALS AND OBJECTIVES

The goals of the Horseshoe Bend wildfire hazard assessment and mitigation plan are to evaluate the hazards of wildland fire within the assessment area and then identify specific actions that could reduce the risks. The objectives are (1) decrease the chances of wildfire spreading from BLM lands to private lands, while (2) decrease the risk of wildfire spreading from private lands to BLM lands; and (3) protecting structures and other valued resources in the community from wildfire.

3.0 BACKGROUND

Wildland fire is an integral component of many forest and rangeland ecosystems. In the conterminous United States before European settlement, an estimated 145 million acres were annually consumed by wildfire. In comparison, only about 14 million acres are currently burned

annually due to increased agriculture, urbanization, habitat fragmentation, and fire suppression programs. This change from the historical fire regime to the present day has caused a shift in the native vegetation composition and structure of fire-prone ecosystems, such as some forests and rangelands, resulting in a dangerously high accumulation of fuels. As a result, when wildland fires do occur, they may burn hotter and grow larger than those in the past and pose an increased risk to human welfare and ecological integrity.

The risks of wildland fires are compounded by the increasing occurrence of human structures and activities in fire-prone ecosystems. The wildland-urban interface occurs where human structures meet or intermix with wildland vegetation. In certain situations, specific actions such as fuels reduction around communities, forest and rangeland restoration, infrastructure improvements, and public outreach may reduce the risk of catastrophic fire in the wildland-urban interface. To this end, the BLM implemented the Communities-at-Risk Wildland-Urban Interface Program. The program seeks to reduce the hazard of wildland fires to communities through public education and outreach, enlisting citizen participation, the reduction or prevention of fuel build-up, and increasing the fire protection capabilities of communities. The Horseshoe Bend community was selected by the BLM to assess the hazard of wildland fire and to identify specific actions that may reduce the risk.

4.0 EXISTING SITUATION

The Horseshoe Bend assessment area is located in Boise County, approximately 20 miles north of the city of Boise. The town is located on the Payette River, and lies in a valley with hills that rise 1,000 to 2,000 feet above the town in virtually all directions. The watersheds of several small tributaries of the Payette River are within the assessment area; in many places the river and parts of these streams occur in deep, steep-sided canyons. Because roads often follow stream valleys, the deep canyons limit vehicle access to much of the watershed as the canyon walls preclude access outside the canyons. On many roads that cross private property, gates and "no trespassing" signs also limit access. About 80 percent of land in the assessment area is privately owned; BLM owns about 15 percent of the land and the State of Idaho, about 5 percent. Most of the BLM land is in one large parcel in the southern portion of the assessment area, the balance is in many small parcels surrounded by private land. The assessment area has an area of approximately 58,000 acres and includes portions of T06N R02E, T06N R03E, T07N R02E, T07N R03E, T08N R02E, and T08N R03E. In developing this report, Dynamac regarded the urban-wildland interface as including all private land in the assessment area, including the town

of Horseshoe Bend. Flammable fuels are present throughout the interface area, and homes and ranch buildings are widely dispersed through the area. Except for the edge of the town of Horseshoe Bend, there is no line of demarcation between urban and wildland boundaries in the area.

Predominant vegetation in most of the assessment area is grass, especially cheatgrass, which dominates flat and south-facing slopes in the area, except at elevations above about 4,500 feet above mean sea level (amsl). Sagebrush and bitterbrush, often occurring with grasses, are also widespread. Forests occur only at elevations above approximately 4,500 feet amsl and occur only in the southeastern part of the assessment area; mesic shrub species (e.g., Ceanothus, chokecherry, snowberry) occur on regenerating forest lands and on north-facing canyon walls at somewhat lower elevations. The primary land use in the assessment area is grazing, with small areas along the Payette River and tributaries irrigated for pasture or alfalfa. The dominant hazardous fuels in the assessment area are grass and sagebrush. The widespread occurrence of cheatgrass reflects a history of disturbance, with native bunchgrasses displaced by disturbance, usually a combination of persistent heavy grazing and/or frequent fire. Grasses and sagebrush, along with scattered stands of Ponderosa pine, also predominate in the corridor along Highway 55 north of Horseshoe Bend. Fires are occasionally started by cars along the highway, posing an additional fire hazard in an area where confined valleys and steep terrain make fire suppression difficult. In July 2001, a 2,000-acre fire deemed the Fleming Creek fire began along the highway and burned to the top of the canyon; it was also a perceived threat to the neighboring community of Crouch before it was suppressed.

It is important to note that the overall hazard due to dom inance of cheatgrass and medusahead wild rye in much of the assessment area may be underestimated. While considered small, light fuels, cheatgrass and medusahead are naturally more prone to burning than native plant species such as bunchgrasses and sagebrush. Although wildfires are sometimes rapidly suppressed in cheatgrass and medusahead, the very dense, fine-textured nature of these species increases both the chance of ignition and the rate of spread of wildfires. During years when the production of cheatgrass and medusahead are high, resistance to control is extreme and may be very dangerous to try and suppress wildfires in this fuel type. Native perennial grasses do not mature until late August and September, whereas cheatgrass matures in June. This changes the type of fires that occur with the dominance of cheatgrass and medusahead, and extends the fire season for nearly 2 months. The presence of continuous stands of flammable cheatgrass and/or medusahead in and around the community probably makes for a higher hazard than the fuel surveys indicate.

The Hazard Report for the Horseshoe Bend community presented and summarized data for fuel and terrain conditions in the assessment area; those results are summarized as follows:

- **Slope:** Slopes at the assessment points were generally steep. Eighty-one percent of the survey sites had slopes that were greater than 30 percent while thirteen percent of sites had slopes between 10 and 30 percent. Only 7 percent of sites had slopes of 10 percent or less.
- **Aspect:** Fifty-five percent of the sites had southern or western exposures, three percent had eastern exposure, and forty-two percent of sites had a northern exposure.
- **Elevation:** Ten percent of sites occurred at an elevation above 5,500 feet amsl; the balance were evenly divided (45 percent each) between sites at an elevation below 3,500 feet amsl and at elevations between 3,500 and 5,500 feet amsl.
- **Vegetation Type:** Sixty-eight percent of survey points had vegetation types scored as "A" (low hazard), twenty-nine percent scored as "B" (moderate hazard), and only three percent as "C" (high hazard).
- **Fuel Type:** Consistent with ratings for vegetation type, sixty-eight percent of sites had fuels dominated by grasses or shrubs rated as "light fuels," twenty-nine percent had brush or small trees rated as medium fuels, and only 6 percent of sites had heavy fuels consisting of timber and large shrubs.
- **Fuel Density:** About half the sites (48 percent) had a continuous fuel density (> 60 percent cover), usually of cheatgrass, while the remaining sites (52 percent) had fuel density rated as broken-moderate, with 30 to 60 percent ground cover.
- **Fuel Bed Depth:** Only twenty-three percent of sites had average fuel bed depths greater than three feet; a majority of sites (52 percent) had fuels one to three feet high, while twenty-six percent of survey points had fuels with an average depth of less than one foot.

The results of the Fuel Hazard Assessment are also graphically illustrated in **Figures 1 and 2**. The charts depict the percentage of assessment points that received a high, moderate, or low hazard ranking.

Along with rangeland, structures are the primary value at risk in the Horseshoe Bend assessment area. Several factors place many of the structures in the assessment area, especially those outside the town of Horseshoe Bend, at significant risk to wildfire. Structures in the assessment area are concentrated in the town of Horseshoe Bend, but there are three clusters of homes in outlying areas (Horseshoe Vue subdivision, Gardena, and an area of new homes along Porter

Creek) and a sizeable number of homes widely dispersed along stream valleysand on ridgetops throughout the assessment area. While most structures in the area are built with fire-resistant materials, most are also in close proximity to fuels, and are not surrounded by survivable space. In addition, many are located in areas with dead-end roads, posing potential access problems for firefighters and for evacuation of residents and firefighters, if necessary.

The structure assessment presented in the Hazard Report provides information on the distribution and characteristics of structures in the Horseshoe Bend area, along with information about access to the area. Those results can be summarized as follows:

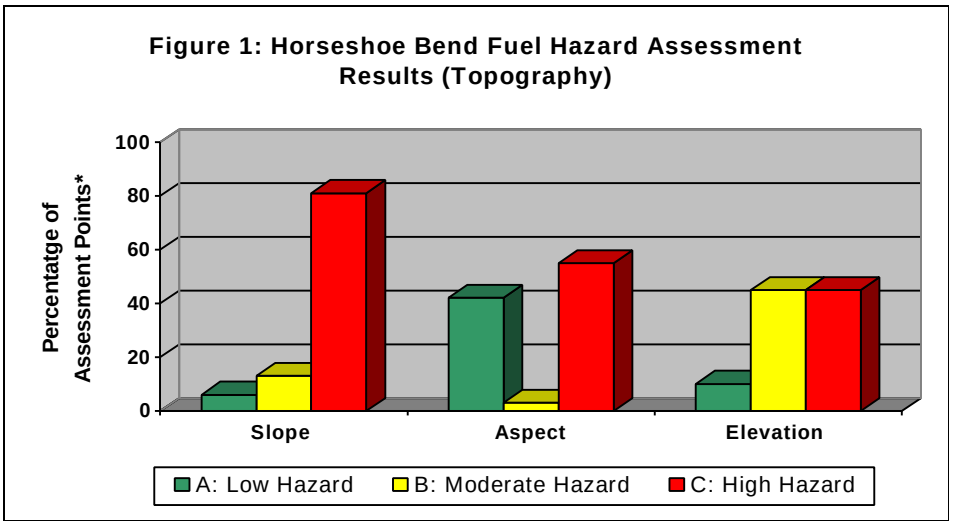
- **Structure Density**: Of 91 total sections, a total of 79 sections were classed as "C" for risk because of low structure density, having less than one structure per 10 acres. Sixty-two of these sections had no structures. Based on structure density for some portion or all of the section, five sections had one structure per five to ten acres (Class B), and six sections had at least one structure per five acres (Class A).
- **Proximity to Structures:** Sixty-eight percent of the sections were classified as "not applicable" because of the lack of structures. Twenty-three percent of the sections were classified as "C" because flammablewildland fuels were less than 40 feet from the structures; six percent were classified as "B," having fuels 40-100 feet from structures, and only three percent had fuels averaging more than 100 feet from structures. In sections having structures, the average structure distance from fuels was less than 40 feet in almost three-fourths (21 of 29, 72 percent) of the sections.
- **Predominant Building Materials:** For the 27 sections having one or more dwellings, almost all (26, or ninety-three percent) received an "A" hazard rating for having a majority of homes with fire-resistant roofing and/or siding. The remaining three sections received a hazard rating of "B" for having 10 to 50 percent of homes therein constructed with fire-resistant materials (Score "B"). The remaining sections were classified as "not applicable" because no structures were found in them.
- **Survivable Space:** Of the 27 sections with one or more dwellings, most (17, or 63 percent) were classified as "C" because less than 10 percent of structures were surrounded by a survivable space. In seven sections, 10-50 percent of homes had survivable space (Class "B"), and only three sections had a majority of homes with survivable space. The remaining 64 sections were classified as "not applicable" because of the lack of dwellings.
- **Roads:** Ten sections (11 percent) had roads classified as "A" (wide, well-maintained), with 37 sections (41 percent) classified as "B" (maintained, but narrow two-lane roads with no

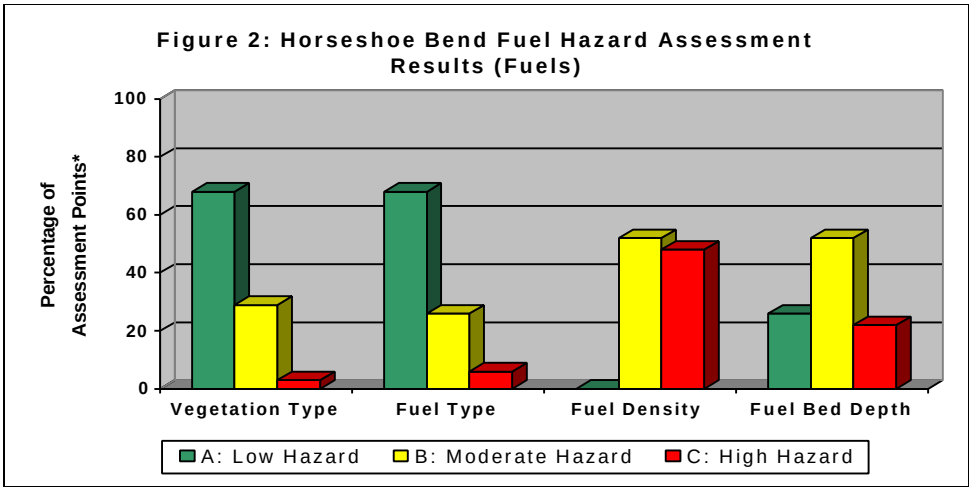
shoulder) and 17 sections (19 percent) had roads classified as narrow or minimally maintained). Twenty-seven sections (30 percent) had no roads.

- **Response Time:** Response times to the sections near the town of Horseshoe Bend are reported by the fire chief to be short, usually 15 minutes or less. Based on this guidance, 28 sections (31 percent) in or close to Horseshoe Bend, on well-maintained roads, were estimated to have a response time of 20 minutes or less (Class "A"). Twenty-seven sections (30 percent) with no roads were estimated to have response times of 40 minutes or more (Class "C"). The 36 remaining sections (40 percent), with Class B or C roads and more than about five miles from town, were estimated to have an intermediate response time of 20-40 minutes (Class "B").
- **Access:** Access to much of the assessment area is problematic; 27 sections (30 percent) have no roads, and another 34 sections (37 percent) have roads judged narrow, steep, and/or one-way dead-end roads (Class "C"). Twenty sections (22 percent) had roads with limited access and/or moderate grades (Class "B"), and only 10 sections (11 percent) had roads with low grades, multiple entrances and wide turn areas for fire trucks (Class "A").

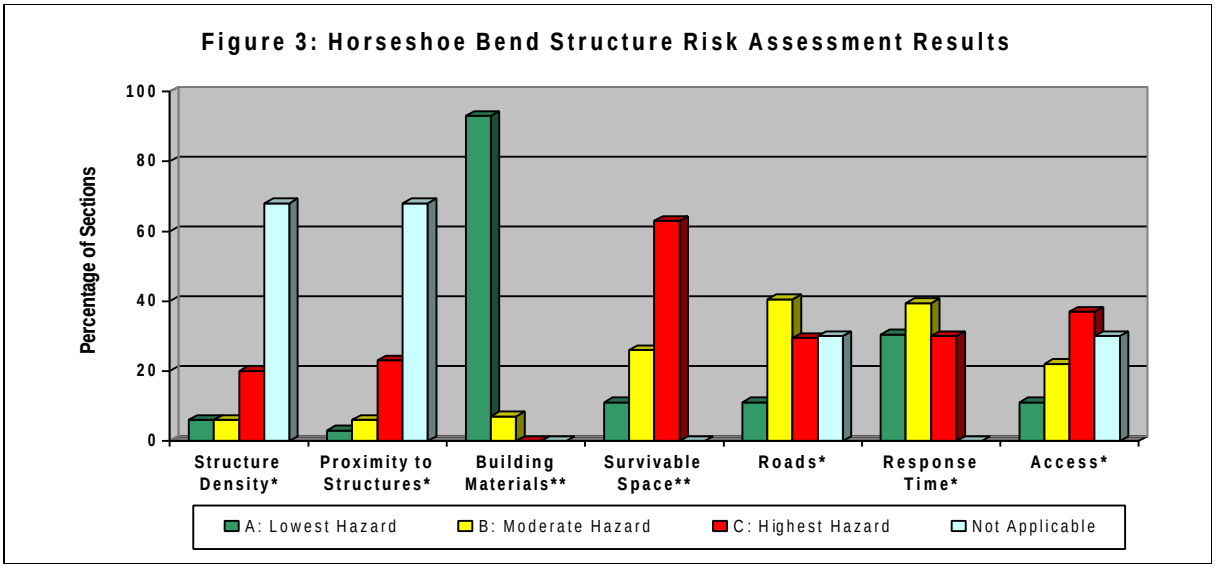
The percentages of sections surveyed for structural hazards that received a high, moderate, or low hazard ranking are graphically depicted in **Figure 3**. It should be noted that for the categories of "Building Materials," and "Survivable Space," the percentages depicted in the chart are based on the 29 sections *with structures*, not the 91 sections surveyed within the assessment area (62 of which had no structures).

Map 2, in the Appendix, merges fuel data with structure density data. For the Horseshoe Bend assessment area, the overlay of the data identified sections without structures in the eastern edge of the assessment area, which are not necessarily the areas of highest risk within the assessment area. The identification of areas of high risk relied on comments from community residents that consider structure density and (low) availability of water for fire suppression.





* Based on a total of 35 points surveyed.



* Based on all 91 sections surveyed within the assessment area.
** Based on 29 sections *with structures* within the assessment area.

Horseshoe Bend has two volunteer fire departments, one for the City of Horseshoe Bend, and a Rural Fire Department. For purposes of this report, the phrase "fire department" will include both of these departments. The departments have limited personnel and equipment, but the volunteers do have some training and experience in fighting wildfire. Significant needs identified in discussions and interviews with community officials, including the fire chief, include better communication equipment, additional self-contained breathing apparatus, and a brush truck to improve response time and suppression capabilities for rangeland fires. These individuals also identified a critical need for water for fire suppression; streams in the area are often nearly dry during the fire season, and water must often be carried by firefighters for fire suppression. Several firefighters and community members suggested that tanks be placed at critical locations in the assessment area so that firefighters' water supplies could be replenished more quickly during fires, improving suppression capabilities.

Through agreement, the Idaho Department of Lands (IDL) is responsible for fire protection of federal lands in this area. There are significant areas south of Horseshoe Bend that are not covered by any local fire department, and are often called "No Man's Land." Fires that start in this unprotected area have been known to move toward Horseshoe Bend, threatening structures and improvements.

5.0 SUGGESTED ACTIONS TO ACHIEVE DESIRED CONDITIONS

Based on discussions with community leaders, fire officials, disaster coordinators, and residents of Horseshoe Bend and the surrounding wildland-urban interface lands, Dynamac determined that the following conditions were desired by the community for improving fire risk along the Wildland-Urban Interface. It should be noted that the desired conditions incorporate all ideas that were expressed to Dynamac and/or BLM staff in interviews, at the two public meetings and through the surveys; some of these have been incorporated into the mitigation recommendations Dynamac has developed.

- Reduce the build-up of fuels on rangeland in the areas surrounding the town of Horseshoe Bend. Most of this land is privately owned, so improvements will depend on cooperation between BLM and landowners.
- Increase the knowledge and understanding of residents to proper firewise activities such as landscaping, use of fire resistant building materials, proper access roads, and emergency evacuation procedures.

- Improve the natural vegetation cover and wildlife habitat on BLM land.
- Increase ability to control wildland fires by pre-positioning water sources at specific locations within the assessment area.
- Increase cooperation between BLM, IDL, and local agencies on wildland fire issues.

6.0 NEED FOR ACTION

Wildfires are common in the Horseshoe Bend assessment area and result from both natural and human causes. To reduce the hazards of wildfire in the assessment area, both general and specific actions are needed. These actions will contribute to reduced wildfire hazards in two ways: first, by reducing vulnerability of individual structures to fire risk; and second, by improving the local capability to suppress wildfire.

General actions include activities that need to occur on a broad geographic scale and on an annual basis. These activities are targeted at reducing fuel loads in proximity to structures, and are most critical in outlying parts of the assessment area. Because homes are widely dispersed in the assessment area, firefighters will not be able to protect more than a handful of structures at any one time when there are large and/or multiple fires in the area. The best approach for overall risk reduction in the community is for individual homeowners to improve the space around their own homes (and other structures) to reduce the probability of rangeland fire carrying from adjacent fuels to their homes. Specific actions needed include creation and maintenance of survivable space around homes, and the creation of firebreaks to increase the distance between structures and flammable fuels. BLM, IDL, and local government support will be important for implementation of these activities, through community education programs, logistical support for disposal of yard debris and cleared brush, etc. As part of these activities, it is also recommended that action be undertaken on a regular basis to remove fuels from the periphery of parking areas used by white-water rafters, such as at Beehive Bend, where high numbers of cars, trailers, and boaters create a serious risk of fire. Another long-term need for the community is to develop and enforce building codes that will reduce vulnerability to fire through mandated use of fire-resistant building materials, better roads and water supplies for planned subdivisions.

A second type of general action needed in the Horseshoe Bend community is to reduce the amount of highly flammable fuels. This is necessary to reduce fire risk and should be done as part of an overall strategy for improving the vegetation cover on rangeland in the area, both to reduce highly flammable fuels and to improve the quality of forage and of wildlife habitat. An

approach already in use is the reseeding of recently burned areas with native grasses; continuation of this approach is strongly encouraged. Proactive approaches to remove cheatgrass in unburned areas prior to seeding of native vegetation (e.g., through mechanical or herbicide treatments) are probably less cost-effective for the Horseshoe Bend community than are other recommended actions. An alternative approach for fuel management suggested by several area residents was to increase grazing intensity. While this approach reduces fuel loads, it may not be consistent with broader goals of rangeland restoration or of promoting a long-term decrease in the amount of cheatgrass and other highly flammable fuels. Several community residents or officials also suggested placing firebreaks along major highways through the area and/or along the Union Pacific Railroad tracks that parallel the Payette River. Firebreaks in these locations may not be cost-effective relative to other treatments, given the size of the area that would have to be treated and the relatively infrequent fires occurring along these rights-of-way. Moreover, in the steep canyons along much of the railroad tracks and highway, fires run upslope very rapidly, so firebreaks would likely do little to prevent fires from running upslope despite any degree of fuels reduction efforts.

A third type of action needed in the Horseshoe Bend community is to improve the Horseshoe Bend city and rural fire departments' resources available for fire suppression. Much of the equipment used by the fire departments is in short supply or obsolete; for example there are not enough self-contained breathing apparatus for each firefighter to have one in a fire, and the departments' radios and radio systems are approximately 30 years old. In addition, the departments' trucks are outdated, and the rural department would benefit from having a brush truck for fighting range fires. Several firefighters and community leaders also noted that suppression activities are often limited by low availability of water, and suggested establishing tanks at strategic locations in the area to provide water where none is available. This would reduce turnaround times for tankers carrying water to fires in more remote parts of the fire district. The need for water tanks was noted for three specific areas where there are clusters of dwellings. The areas include: 1) the Horseshoe Vue subdivision; 2) the area south of the Payette River at the western edge of the assessment area; and 3) an area with a number of new homes along the south side of Porter Creek. The placement of water tanks in these areas would substantially improve fire suppression capabilities. Three additional areas were identified as areas of concern regarding water availability but were not included in the proposed mitigations. One of these is the area around Gardena; this area has a reasonably high concentration of homes and high fuel density, but it is also immediately adjacent to the Payette River. Lawns are watered in much of the area and water is available in the community from both a tank and from

the Payette River. A second is the area with new homes located atop the ridge south of Horseshoe Bend and west of Highway 55; homes in this area are at high risk because of the lack of water in the area and difficult access (one-way roads and a long, steep uphill climb from town to reach the area). This area was not included for mitigation because Dynamac was told that water has already been pre-positioned at the home of the local resident who is developing the area. The third area is an area of planned development near the confluence of Harris and Shafer Creeks; as it develops, placement of a water storage tank should be considered.

Finally, there is a need for improved cooperation and coordination between BLM, IDL, and the Horseshoe Bend Fire Department, and between BLM and the public. Several individuals expressed the perception that regulations discourage or forbid the public from fighting fires on federal land. The result, as they see it, is that small fires that could have been easily controlled or extinguished by the public, now burn until IDL or federal crews arrive, allowing the fire to grow out of control and increasing the time and costs for suppression. Local firefighters also expressed frustration over compensation. Much of their frustration stems from what they feel is an inequity in compensation policies that make compensation different (even for out-of-pocket expenses) depending on whether an individual or the Fire Department is called to a fire by IDL or whether they come on their own accord as the first responder to a fire. Current policies are perceived as unfair, and are a disincentive for the local Fire Department to respond immediately to range fires. An improved understanding of BLM's and IDL's policies for protection and compensation would mitigate these frustrations and concerns.

7.0 METHODOLOGY

The mitigation actions proposed herein for the Horseshoe Bend assessment area are based on information acquired from fuel and structure surveys, two public meetings, and interviews of community officials. Information presented in this report was gathered during the time period of July 30 to August 3, 2001, and during the second public meeting on October 29, 2001.

The fire hazard assessment area surrounding Horseshoe Bend was defined by BLM. The BLM assigned 35 fuel survey points in the assessment area to be evaluated by Dynamac (**Map 1**). The fuel survey points occurred in sections where BLM land occurred. At each survey point, digital photographs were taken of the surrounding area in the four cardinal directions. Also, a wildland fuels fire hazard assessment was completed which rated the characteristic of the land features and fuel sources. The rating elements included slope, aspect, elevation, fuel type, fuel density,

and fuel bed depth, and were assigned to a risk category of low, medium, or high as defined by BLM. (See Section 4.0, "Existing Situation," or Hazard Assessment Report, Appendix B).

Dynamac staff also collected information on the flammability and defensibility of structures on private land for 91 sections located within one mile of federal lands within the assessment area. The structural hazard assessment rated the structures based on the resistance of building materials to fire, and the distance of flammable fuels to the structures located within a section. The rating elements included structure density, proximity of flammable fuels to the structures, building materials, survivable space, and types of roads, response times, and accessibility. Each element was assigned a rating of low, medium, or high hazard category defined by BLM. (See Section 4.0, "Existing Situation," or Hazard Assessment Report, Appendix C).

A public meeting was convened on August 1, 2001, from 6 to 9 pm at the City Hall in Horseshoe Bend. The community was invited to attend through a newspaper article, announcements posted in public places, and flyers distributed by fire prevention specialists and BLM personnel. Dynamac and BLM staff attended the public meeting to hand out firewise brochures, obtain information from the community on hazardous fire situations and desired conditions, and be an informational resource to those attending the meeting. Attendees of the meeting were asked to fill out a survey regarding the community's perceived risk of fire, and the best ways to mitigate the risk. (See Hazard Assessment Report, Appendix D).

In addition to the public meeting, a Dynamac Community Relations Specialist conducted interviews with numerous local public officials and residents. Individuals or groups interviewed included the Horseshoe Bend Fire Chief, a city council member, the Boise County Sheriff, the Boise County Disaster Management Specialist, a Fire Warden for the Idaho Department of Lands, and individual residents of the Horseshoe Bend community. (See Hazard Assessment Report, Appendix E).

A second public meeting was convened on October 29, 2001, at 7 pm in the Horseshoe Bend City Hall. The community was invited to attend through a direct mailing to all residents of the assessment area. Following an introduction by BLM, Dynamac presented a summary of the results of fuel and structure surveys for the assessment area and of the Horseshoe Bend community profile. Based on this information, Dynamac then presented a summary of the desired conditions for the community and recommended mitigation projects to be undertaken by BLM and local cooperators. Following this presentation, there was a period for questions and

answers and general discussion, followed by informal discussions between BLM, Dynamac, and members of the Horseshoe Bend community. The second meeting provided input for adjustments to the final mitigation projects recommended to BLM. (See Appendix F, Hazard Assessment Report).

8.0 PROPOSED PROJECTS AND PRIORITIES

The projects proposed here are based on information obtained from the fuel and structure surveys, community meeting, and interviews. The following specific action items, listed in order of priority, were identified to reduce wildfire hazards in the Horseshoe Bend assessment area:

- Develop an on-going education and outreach program throughout the assessment area to encourage firewise practices,
- Develop and maintain three water-storage tanks in the Horseshoe Bend assessment area to provide water for fire fighting purposes. Recommended locations for the tanks are: 1) the Horseshoe Vue subdivision; 2) the area south of the Payette River at the western edge of the assessment area; and 3) along Porter Creek, near the intersection of Porter Creek Road and Jerusalem Valley Road.

These projects are proposed because of the impact they would have on reducing the hazard of wildland fire in the assessment area. The fuel surveys and structure surveys demonstrated the widespread occurrence of cheatgrass, a highly flammable fuel, throughout the assessment area, and further showed that most structures in the assessment area have fuels in close proximity to structures and that most homes lack survivable space. Because of the highly dispersed nature of structures in most of the assessment area, reductions of fuels in the immediate vicinity of homes and other structures is viewed as the most efficient and effective method of reducing fire risk to structures. For this approach to be successful, a substantial, ongoing community education/outreach effort will be needed to explain to homeowners the importance of their individual efforts, to train and encourage homeowners to implement effective firewise approaches, and to provide logistical support for removal of debris. In the long run, effective public education and outreach programs will likely prove to be the most effective approach to reducing risks associated with wildland fire in the Horseshoe Bend assessment area.

The second priority for Horseshoe Bend is the establishment of water storage tanks or cisterns to "pre-position" water where it will be available quickly to support fire suppression efforts.

Firefighters and community leaders have noted that suppression activities are often limited by low availability of water, and placement of tanks at strategic locations in the area will significantly increase the amount of water available for suppression, as well as decreasing turnaround time for refilling tanks for fires in outlying parts of the assessment area.

In addition, while not proposed as a mitigation project, it should be noted that the Horseshoe Bend fire departments have significant equipment needs. There is insufficient personal protection equipment for all fire fighters, and communication equipment is obsolete. In addition, fire fighters have noted the need for a brush truck. Finally, members of the community have acknowledged that Horseshoe Bend needs to develop and enforce building codes that will reduce vulnerability to fire through mandated use of fire-resistant building materials, better roads and water supplies for planned subdivisions.

8.1 Community Education and Outreach

Purpose of Public Education and Outreach: The purpose of the community-wide education program is to 1) educate the public of the dangers of wildfire in the area, 2) urge residents to take responsibility in reducing the risk of wildfire and to create defensible space around their residences, and 3) increase awareness of the natural role of fire in ecosystems and the benefits of prescribed burning or occasionally managing natural wildland fires to achieve ecological benefits, while maintaining firefighter and public safety as the top priority. The public education and outreach program will be co-sponsored by the BLM and the town of Horseshoe Bend, or possibly Boise County Disaster Services, through a partnership agreement.

Proposed Outreach: An annual "Firewise Clean-Up Day" is one tool that is recommended to encourage residents to create defensible/survivable space around their residence. In conjunction with the Firewise Clean-Up Day, specific demonstration projects may be designed and utilized to educate residents about longer-term investments they could make to increase fire safety. The clean-up day will occur in conjunction with public demonstrations, education programs, and speakers on wildfire and firewise practices. The annual "Firewise Clean-Up Day," education program, and public demonstrations would be most effective in the spring to remind people to prepare their properties for the coming fire season.

Outreach Timing: BLM generally times projects in the following manner. Year One is the year identification and justification of projects occurs, and treatment objectives are determined.

Field surveys begin. In Year Two projects that require compliance with the National Environmental Policy Act (NEPA) are planned, analyzed, and designed. Projects that do not require NEPA compliance begin implementation. In Year Three, NEPA projects begin implementation. All steps are contingent on available funding. In Year Four, post-treatment monitoring begins.

Outreach Necessity: Public education and outreach has been shown to reduce the hazards of wildfire in a community. A community education and outreach program will help identify problems and solutions for both federal and private landowners, and offer opportunities for partnerships and agreements. Implementation of the program, with appropriate actions by homeowners, will reduce fire risk to over 250 structures in the Horseshoe Bend assessment area.

8.2 Water Storage Facilities

Construction of Water Storage Facilities: The BLM and the Town of Horseshoe Bend, through a partnership, should be responsible for the establishment and maintenance of three water storage tanks or cisterns. The decision to develop tanks or cisterns must be resolved between BLM and local residents, based on a decision whether water is needed only during the summer wildland fire season (tanks) or should to be available year-round for fighting both range and structure fires (would require cisterns to avoid freezing in winter). Tanks or cisterns would be strategically positioned at locations identified by the residents of the local communities. Approximate locations of the tanks include:

1) The upper end of the Horseshoe Vue subdivision, adjacent to the existing tank that supplies water for the subdivision (T06N R02E, NW quarter of section 10); this site would also be used to refill tankers for fires throughout the Cottonwood Creek drainage.
2) West of the Horseshoe Bend, along the road south of the Payette River (T07N R02E NE quarter of section 31). This site would supply water for homes in the area and as a refill site for fires in the Payette River drainage. As an alternative to a tank, a pump station to withdraw water from the Payette River might be equally effective and less expensive for this site.
3) Along Porter Creek, near the intersection of Porter Creek Road and Jerusalem Valley Road. (T07N R02E, NE quarter of section 12). There are a number of new homes in this area, and additional growth is likely. This would also serve as a refill site for fighting fires throughout the Porter Creek and Hill Creek drainages.

Type of Water Storage Facilities: The proposed water storage tanks or cisterns should be between 8,000 and 10,000 gallons in size and properly equipped for direct attachment of hoses and for filling tanker trucks. The BLM should be responsible for establishment of the tanks, with costs split between BLM and the Horseshoe Bend rural fire protection district.

Project Timing: The water tanks should be installed spring 2002, or as soon as practical, given funding and planning needs.

Project Necessity: Readily available water sources have been shown to be effective in reducing the risk of wildland fire. Assessment of specific hazards and threats to the Horseshoe Bend community showed the area to be dominated by highly flammable fuels, and further showed homes in the area to be at high risk. Improving fire suppression capabilities will help protect more than 250 structures in the area from wildland fire.

9.0 POTENTIAL SOURCES OF STATE FUNDING

Idaho Department of Lands representative Kurt Houston, who is based out of IDL's Boise office, provided the following information. Communities-at-Risk may benefit from these State-administered grant programs, which provide financial assistance for various types of fire safety-, fire suppression- and fire education-related projects, as well as stewardship activities.

Idaho Fire Assistance Program: A cost-share program designed to assist fire service organizations with organizing, training, and purchasing equipment for fire protection and suppression. Open application period is from May 1 through June 15 each year. Contact Fire Warden Kurt Houston at the Idaho Department of Lands office in Boise at (208) 334-3488 for more information and applications.

Volunteer Fire Assistance Program: A cost-share program with federal funds administered by the State of Idaho. The rural community must have a population of less than 10,000. Only those projects to organize, train, and equip fire service organizations qualify for financial assistance. Open application period is from October 1 through December 31 each year. Contact Fire Warden Kurt Houston at the Idaho Department of Lands office in Boise at (208) 334-3488 for more information and applications.

Federal Excess Personal Property Program: An equipment loaning program for fire service organizations with populations less than 10,000 residents. Usable fire related equipment is loaned to the organization until such time the organization no longer wants it. Titles for vehicles remain with the federal government. Applications are continuously accepted. Contact Fire Warden Kurt Houston at the Idaho Department of Lands office in Boise at (208) 334-3488 for more information and applications.

Forest Incentive Program: Federal cost-share funds administered by the Natural Resources Conservation Service (NRCS). The Forestry Incentives Program (FIP) supports good forest management practices on privately owned, non-industrial forest lands nationwide. FIP is designed to benefit the environment while meeting future demands for wood products. Eligible practices are tree planting, timber stand improvement, site preparation for natural regeneration, and other related activities. FIP is available in counties designated by a Forest Service survey of eligible private timber acreage. Depending on funding, the open application period varies. Contact the nearest NRCS or Tim Kennedy at the Boise IDL for more information and applications. Additional information on the program and NCRS contacts is available at http://id.nrcs.usda.gov/programs.htm.

Stewardship Incentive Program: Federal cost-share funds administered by the NRCS. The Stewardship Incentive Program provides technical and financial assistance to encourage non-industrial private forest landowners to keep their lands and natural resources productive and healthy. Qualifying land includes rural lands with existing tree cover or land suitable for growing trees and which is owned by a private individual, group, association, corporation, Indian tribe, or other legal private entity. Eligible landowners must have an approved Forest Stewardship Plan and own 1,000 or fewer acres of qualifying land. Authorizations may be obtained for exceptions of up to 5,000 acres. Depending on funding, the open application period varies. Contact the nearest NRCS or Tim Kennedy at the Boise IDL for more information and applications. Additional information on the program and NCRS contacts is available at http://id.nrcs.usda.gov/programs.htm.

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Video: Firewise Landscaping, Part 1-Overview.

Video: Firewise Landscaping, Part 2-Design and Installation.

Video: Firewise Landscaping, Part 3-Maintenance.

Video: Wildfire Control--An Introduction for Rural and Volunteer Fire Departments.

Video: The Meeting: Fire Protection Planning in the Wildland/Urban Interface (1991).

Appendix: Maps